Against Search Engines in Primary Care: A Model for Organizing POEMs in the WWW Environment

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It is important for the field of medical informatics to respond to fundamental differences in the ways in which primary care physicians (PCPs) approach the practice of medicine when compared to physicians in specialty care. Areas of difference are highlighted in a recent Special Issue of the Journal of Family Practice in which various authors discuss differing approaches to diagnosis,[1] models of care,[2] and overall philosophical approaches.[3] Such clear distinctions between generalist and specialty practice point to the need for similar differences in how medical informatics researchers treat each category of physician. However, it is striking how little research exists concerning the informatics needs of PCPs. For example, a recent MEDLINE search (medical_informatics AND (family_medicine OR family_practi? OR primary_care OR general_practi?)) retrieved only 36 references concerning PCPs from a total of 1380 indexed as medical_informatics.

This poster suggests that the major reason PCP needs are not being met by medical informatics research is that the prevailing approach to information retrieval follows a database model that is fundamentally flawed from a PCP's standpoint. In a database model, an enduser must submit a query, analyze results, and usually reformulate the same query before retrieving relevant information. Given that PCPs cannot spend significant time formulating, executing, and interpreting the results of bibliographic searches because of busy clinic schedules, should the database retrieval model be maintained?

The database retrieval model has been extended to the World Wide Web (WWW) as reflected by an active area of research in medical informatics and in information science which is concerned with the determination of the best search algorithms for retrieving relevant information. However, for the PCP, problems with the database model are only heightened in the WWW environment. Our proposed approach is based on a rejection of the database model as the primary method for PCP WWW information retrieval. Our model expands on the concept of POEM,[4] an acronym for "patient-oriented evidence that matters," and is defined as "studies that evaluate outcomes that matter to *most of our patients*" (p. 508, emphasis added).

By taking advantage of the bookmarking functionality of standard WWW browser software, the POEM concept can be instantiated as a PCP information retrieval strategy. We have implemented this approach in the Family Practice Residency Program at the University of North Texas Health Science Center at Fort Worth with great success. In particular, we have considerably lessened the use of search engines for routine clinical information inquiries by organizing a set of bookmarks according to a careful analysis of epidemiological, seasonal, and patient population criteria.

This poster discusses implementation issues and provides examples of the POEM model in action that are taken from actual patient care cases. In addition, we present a core set of clinical bookmarks applicable to any PCP practice setting.

References

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